

ABILITY TO RESIST ARTIFICIALLY INDUCED DISSOCIATION

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In a previous paper I called attention to a matter of technique and of interpretation in certain experiments on hypnosis.¹ Some experimenters have failed to produce by means of hypnosis complete and enduring amnesia and post-hypnotic effects. The interpretation made or implied by these experimenters has been that therefore complete and enduring amnesia and post-hypnotic effects cannot be produced. In my own study referred to above I reported an experiment in which complete hypnotic results, permanent for the duration of the experiment (one year), were produced, quite in line with expectation from the older literature. I pointed out that failures in hypnosis, due to an inadequate technique or to the failure to select sufficiently good subjects, should be taken merely at their face value, as hypnotic failures, leaving open the question of the limits of successful hypnosis.

This same problem arises in regard to the experiments reported by P. C. Young in two articles.² A study of the older literature on hypnosis, describing especially the work in the 1880's and 1890's—the period which might be called the golden age of hypnotism—would lead one to conclude that *helplessness* on the part of the subject is an essential feature of successful hypnosis. If a subject is not helpless in a given respect, in this respect he is not hypnotized. A large percentage of persons cannot be hypnotized deeply, according to this older literature. That is to say, only the simpler muscular phenomena, if anything hypnotic at all, can be produced in a considerable proportion of subjects; but to the extent to which they can be hypnotized, to this extent the subjects are helpless and under the control of the hypnotizers. This interpretation seems generally asserted or implied in most

¹ Wells, W. R. The extent and duration of post-hypnotic amnesia. *J. Psychol.*, 1940, 9, 137-151.

² Young, P. C. Is *rappoport* an essential characteristic of hypnosis? This JOURNAL, 1927, 22, 130-139; also The nature of hypnosis: as indicated by the presence or absence of post-hypnotic amnesia and *rappoport*. This JOURNAL, 1928, 22, 372-382.

of the older literature, Young's studies question the validity of such an interpretation of hypnosis, by reporting experiments in which the hypnotizer was unable to produce hypnotic results if the subjects resisted his efforts.

Professor R. H. Wheeler has included the second of the two articles by Young, referred to above, in his *Readings in psychology*,³ introducing it by an editorial note in which he says: "The main theme of the discussion . . . is the fact that cooperation in the trance is limited by purposes which the subject may have had in mind before entering the trance. Heretofore, in the literature on hypnotism, there had been an inclination to overlook the control which the hypnotized person could still exert of his own accord." The fact is that in the older literature the matter of the subject's resistance is taken account of; and when the subject's resistance succeeds, just to this extent hypnosis fails. The older literature tells of subjects being hypnotized "against their wills," even on the first occasion of being subjects, when expecting hypnosis to fail, and when actively struggling against the hypnotizer's commands. But Wheeler's summary of Young's work is correct, namely, that Young failed to get results in cases where the subjects deliberately resisted.

Dorcus and Shaffer, in their *Textbook of abnormal psychology*, express an opinion of hypnosis similar to that of Young, to whose experiments they refer.⁴ They assert of hypnosis: "Loss of volition is genuine only to a certain extent." "Actions on the part of the hypnotized subject are not involuntary, unconscious, or dissociated." Such statements are surprising in view of the fact that such hypnotic phenomena as hallucinations and amnesia clearly transcend the voluntary capacity of the subject. A normal person cannot voluntarily produce in himself genuine hallucinations or specific amnesias. Young does not assert the contrary, but on the basis of his experiments he does assert that the hypnotized subject can voluntarily prevent the production in him by the hypnotizer of hallucinations, amnesias, and muscular helplessness, through a predetermined effort of resistance.

Is Young's work a real and successful criticism of the traditional view of hypnotism, or is it merely an instance of failure

³ Wheeler, R. H. (editor). *Readings in psychology*. New York: Crowell, 1930, 49-60.

⁴ Dorcus, R. M. and Shaffer, G. W. *Textbook of abnormal psychology*. Baltimore: Williams & Wilkins, 1934, 197, 199.

to obtain hypnotic results, due to an inadequate technique or to the selection of subjects not highly hypnotizable? With a view to answering this question, I undertook a repetition of Series Two of Young's experiments. I obtained results directly contrary to Young's, and exactly in line with expectation from the older hypnotic work.

Following, with slight modifications, the general outline of procedure employed by Young in Series Two of his experiments, I conducted a series of experiments with 16 somnambulistic subjects. Each subject, previously selected by group hypnosis and then trained individually to the point of somnambulism, was asked to choose one of the ten hypnotic phenomena of Young's list, and to try to his utmost to prevent the production of this chosen phenomenon in the ensuing hypnotic trance. Young's list is as follows: "(1) Inability to open the eyes. (2) Inability to unclasp the hands. (3) Inability to recall one's own name. (4) Deafness to everything but the E's voice. (5) Inability to raise the feet from the floor. (6) Analgesia. (7) Visual hallucination. (8) Inability to walk. (9) Carrying out of post-hypnotic suggestions. (10) Post-hypnotic amnesia."⁵ As in Young's experiments, each subject was asked to write down the item selected, to put the paper in his pocket, and not to show the paper to me or to tell me what item had been selected until the end of the session. I then asked each subject to cooperate in the experiment as a whole, except in regard to the selected item. I gave the subjects no indication in advance as to my own expectation concerning the results, nor, until the end of each session, did I inquire of the subjects regarding their own expectations.

Beginning with the third subject, and thereafter throughout the rest of the experiments, each subject was asked to choose the critical item by lot, by drawing one of ten slips of paper. This procedure was adopted for the purpose of trying to get a better sampling of the items. Beginning with the tenth subject, and continuing throughout the rest of the experiments, I asked for the subject's anticipation of the results in writing before beginning the experiment. This precaution was to make sure that what the subject told me at the end was what he had

⁵ Young, P. C. Is *rappoport* an essential characteristic of hypnosis? This JOURNAL, 1927, 22, 132-133.

really expected at the beginning. The subject was asked to put the slip on which his expectation was written into his pocket, along with the paper containing the selected item, and at the close of the experiment I saw both papers for the first time.

All of the subjects were undergraduate students. All but two were students in my classes at the time; these two had been in my classes the previous year. All subjects were in good general health. All were of at least average undergraduate intellectual ability and achievement, and several were superior, later going into graduate or other professional studies. There was a third person present at every session, to assist in observations and in taking notes, as well as to insure my own and the subject's protection, a common precaution in hypnotic work.

Experiment 1. I began the series of experiments with subject Si. He had been hypnotized previously on three occasions in individual work following group hypnosis. He selected item 5, and wrote, "While in a state of hypnosis, I will obey all commands except that of being unable to lift my feet from the floor." This writing, as indicated above, was not shown to me or communicated to me until the end of the experiment. During the experiment I detected stronger resistance to item 5 than to the other items, but the subject was unable to lift his feet. At the close of the experiment the subject said that he had expected in advance to be able to resist successfully. There was, of course, complete amnesia following the experiment, as this subject, like all the others, was truly somnambulistic. Consequently the subject could not tell whether or not he had been successful in resisting. In order to get an introspective report from the subject, as well as for the hygienic purpose of leaving him free from possible dissociative effects in everyday life as a result of the experiment, I put him into hypnosis again to remove the amnesia. In this second hypnotic state he recalled that item 5 differed from the other items as follows: he was unable even to *try* to resist the other commands; he could try to resist command No. 5, although he found himself helpless actually to resist.

Experiment 2. A few days later I did the experiment on the second subject, Sa., who had previously been a subject in individual hypnosis once. He selected item 4 (deafness). He wrote, "While in a state of hypnosis I will obey all commands except No. 4 (deafness to everything but the operator's voice)." In

advance, as he told me later, he had expected to be able to resist. I easily detected the critical item. Though I was able to produce complete deafness for some loud sounds, I could not make the deafness complete for *all* sounds aside from my own voice. Since this circumstance left the result of the experiment a little in question, the experiment was repeated two days later. This time the subject selected item 7 (visual hallucination). During this experiment he seemed to be trying unusually hard to resist *all* commands, but I succeeded in getting complete results with all items. I was not able to detect which was the critical item.

Following the practice of Young in his experiments, I was free to vary my technique and to use whatever hypnotic methods I could think of to secure the desired effects. It is usually easier to get hypnotic results if the subject is cooperative in the sense of not being openly defiant in his resistance. But all subjects resist to some extent, or at least they are asked to do so; and neither the subject nor the operator is (or should be) satisfied that hypnosis has occurred except to the degree to which helplessness has occurred. The art of successful hypnotizing consists of precisely this matter of producing increasing helplessness on the part of the subject. Successful hypnotic methods have to be flexible, and adapted to each individual case. An illustration may be offered from the work in Experiment 2. The second session with subject Sa., unlike that on the first day, produced complete deafness to all sounds except the operator's voice. Having gained experience from my partial failure on the previous occasion, I employed different methods, which were entirely successful. To be sure, item 4 was not the one which the subject was supposed to be trying to resist, as I learned later; but actually the subject was trying to resist the production of all hypnotic phenomena. When the subject was hypnotized again for the removal of amnesia for the two trance states of the experiment, he recalled and admitted in hypnosis that all the hypnotic items had been produced completely in the second session, and all but No. 4 in the first, and this one with partial success.

This subject, always a person of strong convictions and with a somewhat defiant attitude—a person of strong will corresponding to his physical strength (and he was a man six feet tall who weighed 200 pounds)—still asserted that it could not be done again. To prove to him that “once a good hypnotic subject,

always a good subject" is the rule in hypnotic work, I proposed that still another test of his helplessness when hypnotized should be given. One of my colleagues, Je., relatively inexperienced at that time in hypnosis but interested in learning, was asked to work the "cigarette test" on Sa. Je. put the subject into a trance state, a lighted cigarette was placed between two fingers, and contractures of the fingers were produced, without analgesia. Twice the subject was able to remove the cigarette as the burning became intense; but on the third attempt Je. rendered the subject completely helpless until he screamed as a result of the pain and cried out, "I give up. I am helpless. Please release me and stop the burning." This "cigarette test" is well known in hypnotic work as a test of the genuineness of hypnotic helplessness, and it served its purpose well in the present instance.

Experiment 3. I carried out the third experiment with subject Pe., who had been a hypnotic subject on three previous occasions. He drew slip No. 2 with the item, "inability to unclasp the hands." All of my commands were effective, and I was unable to tell correctly which was the critical item. I suspected wrongly that it was item No. 5. The subject had previously expected to be able to resist.

Experiment 4. The subject in this experiment was Pr. He had been previously a somnambulistic subject on four occasions, easily made somnambulistic the first time, but hypnotized afterwards for other purposes. He selected by lot item No. 5. All the hypnotic phenomena occurred, and the critical item was not detected by the operator. This subject had previously expected to be unable to resist.

Experiment 5. The subject, Me., had been previously a hypnotic subject on two occasions. He selected by lot item 2. All hypnotic phenomena in the list occurred completely. From the subject's severe, though unsuccessful, struggle to unclasp his hands, I correctly suspected that this was the critical item. The subject struggled so hard in attempting to resist the hand clasping that he complained of pain in his arms and chest after the experiment. He had expected in advance to be able to resist.

Experiment 6. The subject here was Ed., who had previously been a hypnotic subject on two occasions. The item selected by lot was No. 3 (amnesia for his own name). I detected increased resistance on this point. At first, as is not unusual in hypnotic

work under ordinary conditions with the best of subjects, the amnesia was only partial. The subject forgot his last name, but not his first name. Then I succeeded in producing amnesia for all the letters of the alphabet, after which amnesia for his first as well as his last name was complete. Here again is an illustration of how, if one simple hypnotic method does not work, another method may be successful. This subject was the only one of the sixteen to report in advance that he did not have an opinion as to whether or not he would be able to resist.

Experiment 7. The subject, Be., who had previously been a hypnotic subject on one occasion, expected in advance to be unable to resist. Item No. 3 was selected by lot. Hypnosis was successful on all points, and I was unable to detect which was the critical item.

Experiment 8. The subject was Lu., a man who had previously been a hypnotic subject four times, the year before. He expected in advance to be able to resist. He selected by lot item No. 1 (contracture of the eyelids). All points in the hypnotic list worked with complete success, and I could not detect the critical item. Curiously enough, eyelid contractures were so very effective that after the subject came out of the trance, he still could not open his eyes. In order to open them I finally put him back into the trance state. Then I forced him to open his eyes while still in the trance. Imagine my surprise after this incident to learn that the one hypnotic effect so complete that I had experienced difficulty in counteracting it, was the very one which the subject had selected to prevent from occurring at all!

Experiment 9. The subject of this experiment was Wo., previously a hypnotic subject once. The item selected by lot was No. 4 (deafness) and the expectation of the subject inability to resist. In the result, however, all hypnotic efforts were successful. I was unable to detect the critical item.

Experiment 10. Ap., who had previously been a hypnotic subject twice, was the subject. The item selected by lot was No. 6 (analgesia), and the subject expected to be able to resist. The result was complete hypnotic success on all points, though item No. 6 was detected as the critical one. At first, analgesia was only partial, but additional efforts on the operator's part made the analgesia complete.

Experiment 11. The subject was Su., previously a hypnotic

subject three times, and the item selected by lot No. 1 (contracture of eyelids). The expectation of subject was that he would be unable to resist. The result was the inability of subject to resist any of the hypnotic commands; the critical item was not detected by the operator.

Experiment 12. Da. was the subject, previously a hypnotic subject once. No. 5 (inability to raise feet from the floor) was the item selected by lot. The subject expected that he would be able to resist.

Not that I anticipated any special difficulty with this subject, but merely to try out a new method which I thought would be a good one to use in case I should sometime find an unusually refractory subject, I varied my procedure this time as follows. At the start, after putting the subject into the trance state, I produced amnesia for the critical item, without asking or finding out what this item was. After this I worked successfully all parts of the experiment without being able to detect the critical item. The amnesia for the critical item lasted even after the subject was brought out of the trance, though I had not intended such to be the case. The subject had to take the slip of paper out of his pocket and read it before he could tell me which had been the critical item, and even then there was no recognition of the item by the subject.

Here is another illustration of a common fallacy in some of the reported experiments on hypnosis where failures to get the best results are due to inadequacies in the operator's art of hypnotizing. For very refractory subjects in such a series of experiments as the one I am reporting, it seems as if the subject could always be rendered helpless to resist the critical command by being rendered amnesic for it at the start. If he could not be made amnesic for it, or for anything desired, then he would not be a sufficiently good subject for the experiment; or at least he would first need to be developed to the point where complete amnesia for anything whatever could be produced. Young reports that his subject H., used in Experiment 1 of Series Two, had "vague remembrance" after the trance of one incident occurring in the trance.⁶ This fact is evidence that subject H. was not a completely somnambulistic subject, and consequently not suitable for such an experiment.

⁶ Young, P. C. *Op. cit.*, 133.

Experiment 13. The subject, Bl., had previously been a hypnotic subject once. The item selected was No. 4 (deafness). Though the anticipation of the subject was that he would be able to resist, the result was complete hypnotic control of the subject on all items. The critical item was not detected, since complete deafness to all but my voice was produced at once, as easily as any of the other hypnotic phenomena.

Experiment 14. The subject, Luk., previously a hypnotic subject three times, selected by lot No. 6 (analgesia). The anticipation of the subject was ability to resist; yet complete hypnotic success was the result with all items. The critical item was not detected. One interesting feature about this case was that subject Luk. had been taught previously to practice effective self-hypnosis; even so, this knowledge did not enable him to resist any better than had the other subjects.

Experiment 15. The subject was Pel., a hypnotic subject once previously, and the item selected No. 4 (deafness). The subject anticipated that he would be able to resist. Complete deafness to all but my voice was produced, along with all the other hypnotic effects. The critical item could not be detected from observation of the experiment.

Experiment 16. Ro., previously a hypnotic subject twice, was the subject, and No. 10 (post-hypnotic phenomena) the item selected. Anticipation of the subject was that he would be unable to resist. There resulted a successful production of all hypnotic and post-hypnotic effects, although I did detect the critical item. The post-hypnotic commission was that the subject, after hypnosis, should take his fountain pen from his pocket when I tapped on the desk shortly after the termination of the trance state. The subject's hand moved slowly and trembled slightly at the signal; nevertheless, the post-hypnotic action was carried out completely.

The results of the whole series of experiments are presented in Table 1.

The main points in the series of experiments may be summarized briefly as follows: In all 16 individual experiments the subjects were unable to resist the critical or any other commands. The second experiment was the only doubtful one, and when this experiment was repeated the results were unambiguously successful. Ten of the subjects expected in advance to be able to

resist, contrary to Young's contention that what happens in hypnosis is predetermined by the subject's expectation of what will happen. Five of the subjects expected in advance to be unable to resist. One was uncertain in advance, not venturing a prediction.

TABLE I

SUBJECT	ITEM SELECTED	ANTICIPATION OF SUBJECT	RESULT	DETECTION BY EXPERIMENTER OF CRITICAL ITEM	NO. OF TIMES SUBJECT PREVIOUSLY HYPNOTIZED
1. Si.	No. 5	Ability to resist	Complete inability to resist	Yes	3
2. Sa.	No. 4	"	Partial inability to resist	Yes	1
	No. 7	"	Complete inability to resist	No	
3. Pe.	No. 2	"	Complete inability to resist	No	3
4. Pr.	No. 5	Inability to resist	"	No	4
5. Me.	No. 2	Ability to resist	"	Yes	2
6. Ed.	No. 3	No opinion	"	Yes	2
7. Be.	No. 3	Inability to resist	"	No	1
8. Lu.	No. 1	Ability to resist	"	No	4
9. Wo.	No. 4	Inability to resist	"	No	1
10. Ap.	No. 6	Ability to resist	"	Yes	2
11. Su.	No. 1	Inability to resist	"	No	3
12. Da.	No. 5	Ability to resist	"	No	1
13. Bl.	No. 4	"	"	No	1
14. Luk.	No. 6	"	"	No	3
15. Pel.	No. 4	"	"	No	1
16. Ro.	No. 10	Inability to resist	"	Yes	2

tion. With five of the subjects I was able to detect during the experiments the critical items, from evidence of greater efforts to resist. With ten of the subjects I was unable to detect the critical items. With the second subject, Sa., on whom I did the experiment twice, I detected the critical item in the first experiment; in the second experiment I did not detect it.

To prove my contention that helplessness of the subject is an essential feature of hypnosis, it was not necessary to get uniform results with all the subjects. To have obtained positive results with only one of the 16 subjects would have been sufficient. Then the other 15 cases would have been set down as failures due to a poor selection of subjects or to inadequate methods. I had, however, selected excellent subjects from group hypnosis; and then I had developed each of these subjects by previous individual work to the point where I might reasonably expect successful results. I tried no other subjects in this series of experiments.

The outcome of these experiments is merely to substantiate what is evident in the work of the older hypnotizers. It is usually easier to get hypnotic results with cooperating rather than with actively resisting subjects, according to the older literature as well as according to the most casual of present-day experience in hypnotizing; but still it has long been reported that some subjects can be deeply hypnotized, even the first time, though they intentionally resist and though they are skeptical of becoming subjects. In my own practice I have refused to attempt to hypnotize subjects unless they will cooperate to the extent of sitting down and of performing a few simple voluntary acts which I ask them to do. But, with this background of general cooperation, I have insisted that they should resist each hypnotic command to the full extent of their ability, since I am not satisfied with the success of hypnosis except as the subject becomes helpless to resist. With the majority of subjects, only a slight degree of helplessness in regard to simple muscular phenomena, or none whatsoever, can be produced, at least in group work or in short individual sessions. This is only another way of saying that the majority of persons cannot be deeply hypnotized, at least without long and persistent effort. This observation, also, is in line with reports in the older literature.

I did not attempt to repeat the third series of experiments reported by Young. These experiments involved two hypno-

tizers, one of whom trained the subjects in "autosuggestion" before Young tried experiments similar to those of his Series Two (which I repeated). The question here seems largely one of interpretation. One hypnotizer might very well be able to produce effects in subjects which would nullify the later work of another hypnotizer, in part or even *in toto*. The implantation during the hypnotic trance of a subconscious inhibition which operates post-hypnotically to protect the subject from being hypnotized at all by other hypnotizers, is a familiar case in point. The usual and most obvious interpretation of this, however, is in terms of the strong effect of hypnosis in rendering the subject helpless to become a subject thereafter at the hands of other hypnotizers, however much he may desire and strive to become a good hypnotic subject.